

***** **CONFIDENTIAL** *****
 ***** **PREDECISIONAL DOCUMENT** *****
SUMMARY SCORESHEET
FOR COMPUTING PROJECTED HRS SCORE

SITE NAME: Geer Road LandfillCITY: ModestoCOUNTY: StanislausEPA ID #: CAD983578097EVALUATOR: John P. ZwierzyckiJOB #: 62210.12SCORE DATE: 7/13/92LATITUDE: 37° 37' 11.5" NLONGITUDE: 120° 51' 10.5" WT/R/S 4S / 10E / 3THIS SCORESHEET IS FOR A: ☐ PA ☒ SSI ☐ LSI ☐ SIRE ☐ PA Redo ☐ Other (Specify) _____

RCRA STATUS (check all that apply):

☐ Generator☐ Small Quantity Generator☐ Transporter☐ TDSF☒ Not listed in RCRA Database as of (date of print out) 4/12/91

STATE SUPERFUND STATUS

☐ BEP (date) _____☐ WQARF (date) _____☒ No State Superfund Status (date) _____

	S pathway	S ² pathway
Groundwater Migration Pathway Score (S _{gw})	85.55	7,319
Surface Water Migration Pathway Score (S _{sw})	*	
Soil Exposure Pathway Score (S _s)	*	
Air Migration Pathway Score (S _a)	47.37	2,244
$S_{gw}^2 + S_{sw}^2 + S_s^2 + S_a^2$		9,563
$(S_{gw}^2 + S_{sw}^2 + S_s^2 + S_a^2) / 4$		2,391
$\sqrt{(S_{gw}^2 + S_{sw}^2 + S_s^2 + S_a^2) / 4}$		48.89

Pathways not assigned a score (explain):

* Pathways were evaluated qualitatively not quantitatively.

GROUNDWATER MIGRATION PATHWAY SCORESHEET**Factor Categories and Factors**

<u>Likelihood of Release</u>	<u>Maximum Value</u>	<u>Projected Score</u>	<u>Rationale</u>	<u>Data Qual.</u>
1. Observed Release	550	550	GW-1	H
2. Potential to Release				
2a. Containment	10			
2b. Net Precipitation	10			
2c. Depth to Aquifer	5			
2d. Travel Time	35			
2e. Potential to Release (lines 2a x (2b+2c+2d))	500			
3. Likelihood of Release (higher of lines 1 or 2e)	550	550		

Waste Characteristics

4. Toxicity/Mobility	a	10,000	GW-2	H
5. Hazardous Waste Quantity	a	100	GW-3	H
6. Waste Characteristics (lines 4x5, then use table 2-7)	100	32		

Targets

7. Nearest Well	50	50	GW-4	H
8. Population ^d				
8a. Level I Concentrations	b	180	GW-5	H
8b. Level II Concentrations	b			
8c. Potential Contamination	b	166	GW-6	E
8d. Population (lines 8a+8b+8c)	b	346		
9. Resources	5	5	GW-7	
10. Wellhead Protection Area	20	0	GW-8	
11. Targets (lines 7+8d+9+10)	b	401		

Likelihood of Release

12. Aquifer Score ((lines 3 x 6 x 11)/82,500) ^c	100	85.55		
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Groundwater Migration Pathway Score

13. Pathway Score (Sgw), (highest value from line 12 for all aquifers evaluated)	100	85.55	^c
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Aquifer Evaluated Older Alluvium

- a Maximum value applies to waste characteristics category.
b Maximum value not applicable.
c Do not round to nearest integer.
d Use additional tables.

GROUNDWATER PATHWAY CALCULATIONS**8. Population****Actual Contamination**

Well Identifier	Contaminant Detected	Concentration (note units)	Benchmark	(A) Apportioned Population Well Serves	(B) Level* Multip.	(A x B)
Byous	VinylChloride	5.3 µg/l	2 µg/l	3	10	30
Landfill	VinylChloride	19.2 µg/l	2 µg/l	15	10	150
Sum (AxB) Level I						180
Sum (AxB) Level II						

*** Multipliers**

- Level I = 10
- Level II = 1

Potential Contamination

Distance (Miles)	Total Number of Wells Within Distance Ring	Total Population Served by Wells Within Distance Ring	Distance-Weighted Population Values "Other Than Karst" (Table 3-12)** (A)
0 - 1/4	3	450	522
> 1/4 to 1/2			
> 1/2 to 1			
> 1 to 2	2	3,379	939
>2 to 3	1	968	68
>3 to 4	2	1,936	131
Sum (A)			1,660

Potential contamination = $\frac{\text{Sum (A)}}{10} = 166$

** For drinking water wells that draw from a karst aquifer, see the Distance-Weighted Population Values for "Karst" in Table 3-12.

Aquifer Evaluated Older Alluvium

AIR MIGRATION PATHWAY SCORESHEET**Factor Categories and Factors**

<u>Likelihood of Release</u>	<u>Maximum Value</u>	<u>Projected Score</u>	<u>Rationale</u>	<u>Data Qual.</u>
1. Observed Release	550	550	A-1	H
2. Potential to Release ^e				
2a. Gas Potential	500			
2b. Particulate Potential	500			
2c. Potential to Release (higher of lines 2a and 2b)	500			
3. Likelihood of Release (higher of lines 1 or 2c)	550	550		

Waste Characteristics

4. Toxicity/Mobility	a	10,000	A-2	H
5. Hazardous Waste Quantity	a	100	GW-3	H
6. Waste Characteristics (lines 4x5, then use table 2-7)	100	32		

Targets

7. Nearest Individual	50	50	A-3	H
8. Population ^e				
8a. Level I Concentrations	b	150	A-4	H
8b. Level II Concentrations	b			
8c. Potential Contamination ^e	b	17	A-5	E
8d. Population (lines 8a+8b+8c)	b	167		
9. Resources	5	5	A-6	H
10. Sensitive Environments ^e				
10a. Actual Contamination	c			
10b. Potential Contamination	c	0.054	A-7	
10c. Sensitive Environments (lines 10a+10b)	c	0.054		
11. Targets (lines 7+8d+9+10c)	b	222.054		

Air Pathway Migration Score

12. Air Pathway Migration Score (Sa)
[(lines 3x6x11)/82,500] 100

47.37^d

- a Maximum value applies to waste characteristics category.
b Maximum value not applicable.
c No specific maximum value applies to factor. However, pathway score based solely on sensitive environments is limited to a maximum of 60.
d Do not round to nearest integer.
e Use additional tables.

AIR PATHWAY CALCULATIONS**2. Potential to Release****Gas Potential to Release**

Source Type (Name)	Gas Contaminant Factor Value (Table 6-3)	Gas Source Type Factor Value (Table 6-4)	Gas Migration Potential Factor Value (Table 6-7)	Sum	Gas Source Value
	(A)	(B)	(C)	(B+C)	A x (B+C)
1. _____	_____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
Gas Potential to Release Factor Value (Select the highest Gas Source Value)					_____

Particulate Potential to Release

Source Type (Name)	Particulate Contaminant Factor Value (Table 6-3)	Particulate Source Type Factor Value (Table 6-4)	Particulate Migration Potential Factor Value (Table 6-7)	Sum	Particulate Source Value
	(A)	(B)	(C)	(B+C)	A x (B+C)
1. _____	_____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
Particulate Potential to Release Factor Value (Select the highest Particulate Source Value)					_____

AIR PATHWAY CALCULATIONS

(Continued)

8. Potential Contamination

Distance (miles)	Total Population Within Distance Ring	(A) Distance-Weighted Population Value (Table 6-17)
On a source (0)	0	0
>0 to 0.25	450	131
>0.25 to 0.5	0	0
>0.5 to 1.0	0	0
>1.0 to 2.0	3,824	27
>2.0 to 3.0	2,451	4
>3.0 to 4.0	5,909	7
Sum of (A) =		169

Air Potential Contamination Factor Value = $\frac{\text{Sum of (A)}}{10} = 16.9$

10. Sensitive Environments

Wetland or Type of Sensitive Environment	(A) Sensitive Environment Rating Value (Table 4-23)	(B) Wetland Rating Value (Table 6-18)	(A+B)
Actual Contamination Factor Value [sum (A+B)]			

Potential Contamination

Potential Contamination Sensitive Environments Factor Value = $\frac{\text{Sum of DW} \times (A+B)}{10}$ = 0.054

*** Only assign a Wetland Rating Value once for each Wetland within a distance category.**

HRS Rationale - Geer Road Landfill

- GW-1. An observed release to groundwater from the site has occurred. Monitoring wells and domestic wells on site confirm the presence of vinyl chloride, trichloroethylene, and dichloroethenes at levels three times greater than representative background samples. (SWAT report and 1991 GW monitoring report).
- GW-2. The toxicity of vinyl chloride is 10,000, with an observed release the mobility is 1. Toxicity/mobility is 10,000 (Chemical Look-up Tables dated 4/12/91).
- GW-3. Waste quantity at the site is represented by the surface area of the 144 acre landfill; $144 \text{ acres} \times 43,560 \text{ sq. ft/acre} = 6,272,640 \text{ sq. ft}$. $6,272,640 / 3,400$ (Tier D divisor) = 1,845. Using Table 2-6, waste quantity value is 100.
- GW-4. The nearest well value was obtained from having Level I contamination in both the Landfill production well and the Byous well. The Byous well was contaminated with vinyl chloride at $5.3 \mu\text{g/L}$, while the landfill production well was contaminated with vinyl chloride at $19.2 \mu\text{g/L}$.
- GW-5. Level I contamination was found in the two aforementioned wells, see calculations in HRS worksheets, and section 3.3.2.2 of the Federal Register.
- GW-6. Potential contamination was scored as follows: For known domestic wells, multiply the average household size (2.916 for Stanislaus County) by the number of wells within the distance ring. For production wells from a public system, apportion the population as per the Federal Register Section 3.3.2.4. The town of Hughson has two public wells which serve 3,379 people. Both wells are within 2 miles of the landfill. The Del Este Water Company serves approximately 2,904 people from 3 wells in a blended system. One well is between 2 and 3 miles of the site, while the other 2 are between 3 and 4 miles. The pinewood Meadows Mobile Estates has two wells which have the capacity to serve 519 people. Both of these wells are 0.25 miles or less from the site. The Streeter residence is hydraulically downgradient (within 0.25 miles) from the site. This well serves approximately 3 people.
- GW-7. Groundwater from irrigation wells is used to water fruit and nut orchards (5 acre parcels or greater) within 4 miles of the site.
- GW-8. There are no known wellhead protection areas within 4 miles of the site.
- A-1. An observed release of vinyl chloride, methane, TCA, TCE, methylene chloride, and PCE occurred at the landfill on June 25, 26, and 27, 1987 (Air SWAT, Brown and Caldwell, September 1987).
- A-2. Toxicity of Vinyl chloride is 10,000, gas mobility is 1 (Chemical look-up table).
- A-3. The nearest individual lives between 0 and 1/8 mile from the site at the Pinewood Meadows Mobile Home Park across Geer Road.
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- A-4. There were approximately 15 full time employees working at the Geer Road Landfill. Level I contamination has been documented by a air solid waste assessment test.
- A-5. Potential contamination, see HRS worksheets (GEMS).
- A-6. Resources lie within 0.25 miles of the site (Orchards and row crops).
- A-7. Sensitive environments potential contamination see HRS worksheets.
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